

U.S. Appln. No. 09/850,981
Reply to Office Action dated October 06, 2005

PATENT
450100-03211

IN THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application. An identifier indicating the status of each claim is provided.

Listing of Claims

1. (Currently Amended) A magnetic-tape recording apparatus for recording digital image data into a track on a magnetic tape by a rotating head, comprising:

inputting means for inputting the digital image data;

extracting means for extracting digital image data for variable-speed reading, from the digital image data input by the inputting means; and

recording means for recording digital image data extracted by the extracting means ~~into only a first area positioned at almost the center of the track, or recording the digital image data in a distribution manner into the~~ a first area positioned at almost the center of the track and a second area to be traced during variable-speed reading, positioned in a track located in the vicinity of the track which includes the first area,

wherein the recording means records digital image data to be recorded into each of the first area and the second area, into each area a plurality of times.

2. (Original) A magnetic-tape recording apparatus according to claim 1, wherein digital image data recorded into the first area is digital image data read in common in variable-speed reading in the positive direction and in variable-speed reading in the reverse direction.

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3. (Original) A magnetic-tape recording apparatus according to claim 1, wherein the recording means sets a predetermined number of tracks to one group, and records the digital image data extracted by the extracting means into each of the first area and the second area according to a predetermined pattern in each group.

4. (Original) A magnetic-tape recording apparatus according to claim 1, wherein the recording means records the digital image data extracted by the extracting means into the magnetic tape by a rotating head having an azimuth which is determined to have a recording magnetization direction close to the arrangement direction of a magnetic material applied to the magnetic tape.

5. (Original) A magnetic-tape recording apparatus according to claim 1, wherein, when the digital image data extracted by the extracting means is recorded into tracks having both azimuths, the recording means records digital image data for a larger-times-faster reading into a track with an azimuth having a recording magnetization direction closer to the arrangement direction of a magnetic material applied to the magnetic tape, and records digital image data for a smaller-times-faster reading into the other track.

6. (Original) A magnetic-tape recording apparatus according to claim 1, wherein the recording means generates digital image data for n-times-faster reading, and arranges and records the digital image data at almost the center of each track at an interval of n tracks or 2n tracks, where n is a power of 2, and the arranged digital image data is

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used during m-times-faster variable-speed reading in the positive direction and in the reverse direction, where m is a power of 2, and during normal-speed reading in the reverse direction.

7. (Original) A magnetic-tape recording apparatus according to claim 6, wherein n and m satisfy the relationship of $m < n$.

8. (Canceled)

9. (Currently Amended) A magnetic-tape recording apparatus according to ~~claim 8~~claim 1,

wherein the digital image data is formed of a sync block having a predetermined length; and

wherein the recording means records the digital image data into each area the plurality of times, with an area corresponding to (L-N) sync blocks being disposed between the data, where N indicates the number of sync blocks to be recorded into the first area or the second area, and L indicates the number of sync blocks which can be captured in the first area and the second area.

10. (Currently Amended) A magnetic-tape recording apparatus according to ~~claim 9~~claim 1,

wherein the recording means specifies one location as a trace target of phase lock servo, arranges the digital image data at the location and at locations positioned therebefore and

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thereafter where data can be captured, and records the same digital image data the plurality of times such that the value of (L-N) becomes larger as the head is farther from the trace target.

11. (Currently Amended) A magnetic-tape recording method for a magnetic-tape recording apparatus for recording digital image data into a track on a magnetic tape by a rotating head, comprising:

an input control step of controlling the input of the digital image data;

an extracting step of extracting digital image data for variable-speed reading, from the digital image data input by a process in the input control step; and

a recording control step for controlling such that digital image data extracted by the process in the extracting step ~~is recorded into only a first area positioned at almost the center of the track, or the digital image data is recorded in a distribution manner into the a first area positioned at almost the center of the track~~ and a second area to be traced during variable-speed reading, positioned in a track located in the vicinity of the track which includes the first area,

wherein digital image data to be recorded into each of the first area and the second area, is recorded into each area a plurality of times.

12. (Currently Amended) A recording medium storing a computer-readable program for a magnetic-tape recording apparatus for recording digital image data into a track on a magnetic tape by a rotating head, the program comprising:

an input control step of controlling the input of the digital image data;

an extracting step of extracting digital image data for variable-speed reading, from the digital image data input by a process in the input control step; and

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a recording control step for controlling such that digital image data extracted by the process in the extracting step is ~~recorded into only a first area positioned at almost the center of the track, or the digital image data is recorded in a distribution manner into the~~ a first area positioned at almost the center of the track and a second area to be traced during variable-speed reading, positioned in a track located in the vicinity of the track which includes the first area, wherein the digital image data to be recorded into each of the first area and the second area is recorded into each area a plurality of times.

13. (Currently Amended) A magnetic tape, wherein digital image data for variable-speed reading is ~~recorded into a first area positioned at almost the center of a track, or the digital image data is recorded in a distribution manner into the~~ a first area positioned at almost the center of a track and a second area to be traced during variable-speed reading, positioned in a track located in the vicinity of the track which includes the first area, wherein digital image data to be recorded into each of the first area and the second area is recorded into each area a plurality of times.